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EXAMINER

KISH, JAMES M

ART UNIT PAPER NUMBER

3737

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamashita et al. (US Patent No. 6,240,309). Yamashita discloses an optical measurement instrument that applies incident light of a wavelength in a visible-infrared region to a plurality of positions on the surface of the subject and light detection means for simultaneously detecting lights obtained by allowing the incident light to pass through the subject (see Abstract). The invention allows for measurements of high-order brain functions such as thought, language, motor, etc. (column 1, lines 24-25). These functions are closely related to oxygen metabolism and blood circulation inside the living body (column 1, lines 50-67). There is a memory device for storing the rate of change in hemoglobin concentration (column 29, lines 56-65). Column 30, lines 45-67 discuss using the system to learn brain functions associated with a subjects motor skills and utilizing such findings for the physically handicapped. Column 31, lines 3-10 discusses other uses of the system, including use as a lie detector.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-19, 21-26, 28-30, and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al. in view of Langleben (US Patent Application No. 2005/0154290). Yamashita discloses an optical measurement instrument that applies incident light of a wavelength in a visible-infrared region to a plurality of positions on the surface of the subject and light detection means for simultaneously detecting lights obtained by allowing the incident light to pass through the subject (see Abstract). While Yamashita contemplates using the device to detect deceit in a subject, no detail is given as to what procedures would be utilized in this embodiment of the invention. Langleben teaches a method and system for measuring changes in the brain activity of an individual by functional brain imaging methods (see Abstract). Examples are given for the use of the device that include showing playing cards to a subject and asking simple questions over a 22 minute time period (Paragraph 55), recognition of familiar faces (see Example 2, Paragraphs 71-73), as well as brain functions in response to advertisements (Paragraphs 74-78). Other uses of the system are taught in paragraphs 49-51. Paragraph 39 discusses motor control being related to the invention. Paragraphs 40 and 44 teach three separate data being obtained (control, lie, and truth), each providing different levels of response within the brain. Additional parameters such as skin conductance, heart and respiratory rate and blood pressure

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are also collected as needed (Paragraph 78). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaches of Langleben in the lie detector embodiment of Yamashita et al. due to their related field of study, as well as the fact that Langleben states that methods of measurement of regional cerebral blood flow and oxygenation such as Near Infrared Spectroscopy, which, once commercialized, could be used by an average practitioner in the present invention in the same fashion as fMRI.

3. Claims 27 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al. in view of Langleben, further in view of Pavlidis (US Patent No. 6,996,256). Yamashita discloses an optical measurement instrument that applies incident light of a wavelength in a visible-infrared region to a plurality of positions on the surface of the subject and light detection means for simultaneously detecting lights obtained by allowing the incident light to pass through the subject (see Abstract). While Yamashita contemplates using the device to detect deceit in a subject, no detail is given as to what procedures would be utilized in this embodiment of the invention. Langleben teaches a method and system for measuring changes in the brain activity of an individual by functional brain imaging methods (see Abstract). Additional parameters such as skin conductance, heart and respiratory rate and blood pressure are also collected as needed (Paragraph 78). However, the additional parameter of evaluating the subject's temperature is not taught. Pavlidis teaches a thermal imaging system and method to determine a physiological state of a person, e.g. anxiety. It would have been

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obvious to one having ordinary skill in the art at the time the invention was made to use the thermal imaging to provide for a different parameter other than the ones taught by Langleben because an onset of anxiety in an individual may be induced by lying (column 4, lines 59-64).

4. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being obvious over Yamashita et al. in view of Langleben, further in view of Chance et al. (US Patent No. 5,954,053).

5. The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

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6. Yamashita discloses an optical measurement instrument that applies incident light of a wavelength in a visible-infrared region to a plurality of positions on the surface of the subject and light detection means for simultaneously detecting lights obtained by allowing the incident light to pass through the subject (see Abstract). While Yamashita contemplates using the device to detect deceit in a subject, no detail is given as to what procedures would be utilized in this embodiment of the invention. Langleben teaches a method and system for measuring changes in the brain activity of an individual by functional brain imaging methods (see Abstract). Additional parameters such as skin conductance, heart and respiratory rate and blood pressure are also collected as needed (Paragraph 78). However, an additional parameter of evaluating the subject's brain activity is not disclosed. Chance teaches that EEGs and MEGs can be used to quickly gather information regarding brain activity. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an EEG or MEG as the additional parameters because there is a linkage between cerebral activity and oxygen delivery and oxidative metabolism in the brain tissue during such activity (column 2, lines 16-20).

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Kish whose telephone number is 571-272-5554. The examiner can normally be reached on 8:30 - 5:00 ~ Mon. - Fri..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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